



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/590,527	06/08/2000	Salman Akram	4101US (99-0572)	1156

7590

07/30/2003

Brick G Power
Trask Britt
PO Box 2550
Salt Lake City, UT 84110

EXAMINER

MITCHELL, JAMES M

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/590,527	Applicant(s) AKRAM, SALMAN	
	Examiner James Mitchell	Art Unit 2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 38-55, 59-63 and 67-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (APA) in combination with Hashimoto (US 6,410,366).

APA (FIG 1,2; Spec. Page 3, 4 & 13) discloses an assembly, test substrate and a semiconductor device that is a die (200) comprising an inherent substrate formed from a wafer or chip scale package and contact pad (202) being arranged in at least one substantially linear relationship positioned at or proximate a centerline of said substrate and being configured to communicate with corresponding test pads (230) of a test substrate (210) upon disposing said substrate face-down over said test substrate; with at least one conductive structure (220) disposed between said test substrate and said semiconductor device.

APA does not appear to disclose at least one elongated stabilizer protruding from said surface wherein said stabilizer is dielectric or photopolymer that is at least a semisolid that is inherently comprised of a plurality of superimposed, contiguous, mutually adhered layers, said at least one stabilizer inherently being configured to at least partially stabilize an orientation of the semiconductor device upon disposal thereof

face-down over said test substrate; wherein said stabilizer protrudes from said surface at most a distance between a plane of said surface of said substrate and a plane of a surface of said test substrate upon disposing said substrate face-down over said test substrate; and at least one said stabilizer positioned to be located proximate a corner of said surface and has a cross-sectional plan of an quadrilateral; said stabilizer secured to said surface of said test substrate.

However Hashimoto (Fig 1a-c; Col. 5, Lines 34-58) utilizes at least one elongated stabilizer (11,21) protruding from said surface wherein said stabilizer is dielectric that is at least a semisolid that is inherently comprised of a plurality of superimposed, contiguous, mutually adhered layers, said at least one stabilizer inherently being configured to at least partially stabilize an orientation of the semiconductor device upon disposal thereof face-down over said test substrate; wherein said stabilizer protrudes from said surface at most a distance between a plane of said surface of said substrate and a plane of a surface of said test substrate upon disposing said substrate face-down over said test substrate; and at least one said stabilizer positioned to be located proximate a corner of said surface and has a cross-sectional plan of an quadrilateral; said stabilizer secured to said surface of said test substrate.

It would have been obvious to one of ordinary skill in the art to incorporate stabilizers to the substrate of APA in order to provide support as taught by Hashimoto (Col. 5, Line 53).

Claims 56-58 and 64-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA and Hashimoto as applied to claims 56 or 60 and in further combination with Grigg (US 2001/0051395).

Neither APA nor Hashimoto appear to disclose the stabilizer formed of a photopolymer, but Grigg utilizes a photopolymer.

It would have been obvious to one of ordinary skill in the art to form the modified stabilizer of APA and Hashimoto out of a photopolymer in order to provide an insulating material as taught by Hashimoto.

Response to Arguments

Applicant's arguments with respect to claims 38-69 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


Art Unit: 2827

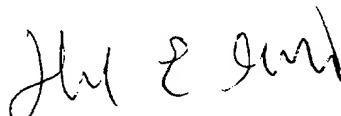
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Mitchell whose telephone number is (703) 305-0244. The examiner can normally be reached on M-F 10:30-8:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on (703) 305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3230 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


jmm
July 25, 2003


DAVID E. GRAYBILL
PRIMARY EXAMINER